

REMARKS

Because the claims in their current form are believed allowable over the references of record, Applicant is filing these remarks along with a Notice of Appeal. The Examiner is respectfully requested to reconsider the outstanding rejections in light of the explanations provided herein, and to pass the application to issue without further amendment.

Applicant's undersigned attorney would like to thank the examiner for the courtesy of participating in an interview on May 19, 2004. During the interview, Applicant's attorney, Nathaniel Ari Long, asked the examiner to further explain his justification for relying on the references of record in rejecting the pending claims. It was agreed that Mr. Long would further consider the Official Action in light of the discussion, and follow up by either contacting the examiner with further questions or submitting a formal Response to the outstanding Office Action, including any claim amendments and remarks as necessary to distinguish the references. The examiner is respectfully invited to call Applicant's attorney at (206) 332-1380 if he feels further discussion would be helpful.

Claims 1-23 are pending in the present application. Claims 1, 12, and 18 are the independent claims. In the Official Action, dated April 1, 2004 claims 12-23 were rejected under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Patent No. 6,606,740 B1 ("Lynn et al."). Claims 1-11 were rejected under 35 U.S.C § 103(a) as being allegedly obvious over Lynn et al. in view of U.S. Patent No. 5,729,747 ("Tsukakoshi"). The outstanding rejections are respectfully traversed.

Summary of the Invention

There is often a disconnect between the language of the business people who envision software and the needs of the programmers who design and implement software. This

disconnect may result in the software developers' failure to capture all of the "use cases" that may be helpful for users of software because the developers do not fully appreciate the nature of the business process that they will implement. A "use case" is an instance of the use of the software by an actor. Application 2, line 2.

The present invention provides a method and tool for designing software. Application 3, line 7-8. First, a business plan for the software is specified. Next, one or more "focus areas" are identified. Application 3, line 9-10. Each focus area includes a set of "requirements" for the system. Application 3, lines 10-11. These requirements include a description of a process to be performed and any constraints on the manner in which the process is to be performed. Application 3, lines 11-14. The focus area also includes a set of "participants" who will interact with the specified process. Application 3, lines 14-15. **Each participant may have one or more identifiable "roles."** Application 3, lines 15-16.

The focus area may be decomposed into several "sub" focus areas. Application 3, line 20. Sub-focus areas are created by identifying aspects of the original focus area. Application 3, line 21-22. Each sub-focus area has a set of one or more participants. Application 3, line 25-26. Focus areas are decomposed recursively into lower and lower levels until **each of the sub-participants (i.e., actors) in the tasks covered by the lowest level focus area has only one role.** Application 4, line 2-4. A focus area where all of the participants have only one role is analogous to a "business use case," which may then be modeled by conventional means. Application 4, lines 4-6.

Lynn et al.

Lynn et al. discloses a framework for developing a workflow processing system using object oriented design principles to minimize coding effort. See Lynn et al. column 2, lines

56-60. It provides a set of software objects, each uniquely performing a function in a workflow processing system. *See* Lynn et al. column 4, lines 52-54. The functionality provided by the objects is broad enough to apply to many different line of business applications. *See* Lynn et al. column 4, lines 64-66. Different applications and different users would utilize different subsets of the software objects to accomplish the work they are conducting. *See* Lynn et al. column 5, lines 62-65.

The software structure disclosed in Lynn et al. is shown in Lynn et al. figure 2. The corresponding text, found from column 5, lines 8-51, states the following:

The relationship between the objects in a workflow processing framework according to the present invention and the peripheral processes is illustrated in FIG 2. **At the bottom level are conventional platforms 20...** These conventional platforms 20 may run on any type of computer system... **A set of foundation objects 22 access the conventional platforms 20** using standardized protocols whenever possible...

The foundation objects 22 are illustrated separately from the **objects 24 providing common functions** in support of different applications, because in a specific enterprise environment standardized protocols may not be available and the foundation objects may need to be modified to utilize conventional platforms 20 existing in the enterprise environment or previously selected for use with the workflow processing system...

The objects 24 providing common functions in support of different applications provide “foldering” of materials... used by each case and workflow function... **Business processes 26 written in conventional programming languages perform enterprise specific functions.** The business processes may be written in a variety of programming languages...

The above language from Lynn et al. demonstrates that the reference is directed to a general structure or framework for software, in which the bottom level is a conventional platform, the next level is a set of foundation objects, followed by objects providing common functions, and finally business processes. **The notion of developing software by determining participants and associated roles is not present, and neither is a sub-focus area where each participant has only one single role.**

Rejection of Claims 12-23 under 35 U.S.C. § 102(e)

As stated above, Claims 12-23 were rejected under 35 U.S.C. § 102(e) as allegedly anticipated by Lynn et al. Applicant respectfully traverses for at least the following reasons.

Rejections under 35 U.S.C. 102(e) require that the reference (or combination of references) disclose every element of the claim. According to the MPEP, “for anticipation under 35 U.S.C. 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly.” MPEP § 706.02. Lynn et al. does not disclose at least one aspect of claims 12-23. Independent claim 12 provides:

12. A method for providing computer-assisted software engineering comprising:

receiving **first information** indicative of a first focus area, said first focus area representing:

a set of first requirements for software to be developed; and
a set of first participants in the use of said software;

receiving a division of said set of first requirements which indicates a plurality of separate first aspects of said set of first requirement;

displaying said set of first requirements and said set of first participants;

receiving **second information** indicative of a second focus area, said second focus area including:

a set of second requirements for a one of said first aspects;

and

a set of second participants who participate in a use of said one of said first aspects, said second set of participants being based on said first set of participants;

receiving a division of said set of second requirements which indicates a plurality of separate second aspects of said set of second requirements;

displaying said set of second requirements and said set of second participants;

receiving **third information** which includes:

a set of third requirements for a one of said second aspects;

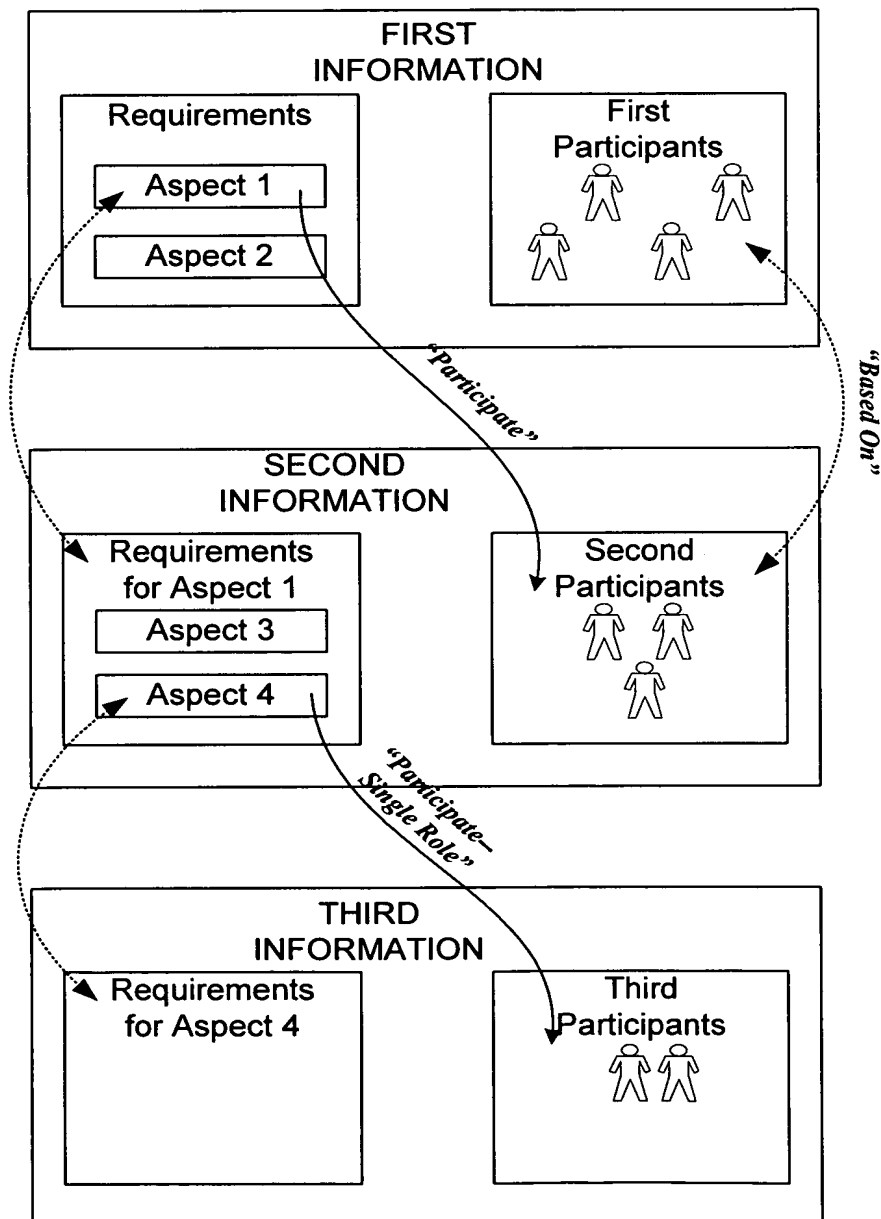
and

a set of third participants who participate in a use of said one of said second aspects, each of said third participants **having only a single role** with respect to said one of said second aspects; and

generating a use case based on said third information, said use case defining an instance of the operation of said software by a one of said third participants participating in said one of said second aspects.

(emphasis added). Generally referring to the bolded text above, claim 12 requires receiving first information, second information, and third information. Each information includes:

1. requirements; and, 2. participants. In addition, the first, second, and third information are related to one another. To clearly understand some the relationships between the informations in claim 12, see the figure on the following page of this response.



Claim 12

The above illustration can be understood by referring to the language of claim 12. In short, each of three informations includes: 1. requirements; and, 2. participants. The requirements of the second information are directed to one of the aspects of the first information (as illustrated, aspect 1). The participants of the second information participate in a use of this same aspect, i.e. the aspect of the first information for which further requirements are specified in the second information. Likewise, the requirements of the third information are directed to one of the aspects of the second information (as illustrated, aspect 4). Again, participants of the third information participate in a use of this same aspect—the aspect of the requirements of the second information for which further requirements are specified in the third information. Finally, the third participants have only a single role with respect to an aspect (as illustrated, aspect 4).

There are a multitude of limitations in claim 12 that are simply not present in Lynn et al. However, because a reference is deficient if it lacks only one limitation of the claim, this response will focus on the failure of Lynn et al. to teach “*each of said third participants having only a single role with respect to said one of said second aspects.*” See claim 12, above. Lynn does not disclose limiting participants to a single role in any context, whether with regard to an aspect of requirements for software or otherwise.

A role is defined in the specification for the present invention beginning on App. 11, last paragraph. “A role represents the behavior of a participant...with respect to an aspect of a business process...[A] professor can be both an event scheduler and an invitee to an event. These roles are separate and distinct with respect to the overall business process in the sense

that, when a professor schedules an event, he behaves differently with respect to the software...than he would behave if he were receiving an invitation to an event.”

The Official Action cites Lynn et al. Fig. 3 as disclosing the limitation in question. This figure presents a series of boxes labeled “business processes 26,” and a series of boxes labeled “objects 24.” Both “business processes” and “objects” are software. See Lynn et al. 5:42-5:43 (“objects providing support of different applications”); Lynn et al. 5:47-5:48 (Business processes written in conventional programming languages...). The notion of a participant in the use of such software is absent from Lynn et al. Fig. 3. Perhaps more importantly, Lynn et al. does not disclose, in Fig. 3 or elsewhere, limiting a participant to a single role.

Applicant acknowledges that various portions of Lynn et al. refer to “users.” *See, e.g.*, Lynn et al. 5:62-5:65 (“Different applications and different users would utilize different subsets of the business processes, common objects, foundation objects and conventional platforms.”); 6:37-6:39 (“The user assignment module provides balanced distribution of work based on each user’s load factor stored in a database table.”). However, the “users” of Lynn et al. are not equivalent to the “participants” of Applicant’s invention. This is because participants are represented in a first focus area *in a method for providing computer assisted software engineering*. See claim 12. Thus, “participants” of the invention, while they may correspond to physical people, are actually an entity represented in data as part of designing software. In contrast, the “users” of Lynn et al. are simply those for whom the software is designed, just as most software is designed for use by users.

Even if the “users” were considered equivalent to “participants,” there is no teaching in Lynn et al. that the users are limited to a single role in using the system provided in Lynn.

Therefore, Applicant respectfully requests that the Examiner in the next Action specifically point out and provide a detailed explanation where Lynn teaches participants having only a single role in using the software of the system.

In view of the foregoing, it is respectfully submitted that independent claim 12 is patentable over Lynn et al. As claims 13-17 depend either directly or indirectly from claim 1, they are believed allowable for the same reasons. Withdrawal of the rejections under 35 U.S.C § 102(e) is thus earnestly solicited.

Claim 18 contains identical structure to claim 12, differing only in the preamble. In claim 12, the preamble is directed to a method, and in claim 18 the preamble is directed to a computer-readable medium. Because of the otherwise identical structure, it is respectfully submitted that independent claim 18 is also patentable over Lynn et al. As claims 19-23 depend either directly or indirectly from claim 18, they are believed allowable for the same reasons. Withdrawal of the rejections under 35 U.S.C § 102(e) is thus earnestly solicited.

Rejection of Claims 1-11 under 35 U.S.C. § 103(a)

Claims 1-11 were rejected under 35 U.S.C § 103(a) as being allegedly obvious over Lynn et al. in view of Tsukakoshi. As with rejections under 35 U.S.C. 102(e), rejections under 35 U.S.C. 103(a) require that the reference (or combination of references) disclose every element of the claim. As stated in the MPEP, “the prior art references (or references when combined) must teach or suggest all the claim limitations.” MPEP § 706.02(j). Also, “[o]bviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation

to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art.” MPEP 2143.01.

The references are similarly deficient with regard to claims 1-11, again because at least one element of these claims is not present in either Lynn et al. or Tsukakoshi.

Independent claim 1 provides:

1. A method for developing software, the method comprising:
defining a **focus area** which represents:
a **business process** to be performed by the software under development; and
one or more first participants in said business process, at least one of said first participants having a plurality of roles;
decomposing said focus area into one or more **sub-focus areas**, each of said sub-focus areas including:
a **subset of said business process**; and
one or more second participants in said subset of said business process, each of said second participants **having only a single one of said plurality of roles**;
creating a use case based on a first one of said one or more sub-focus areas, said use case comprising an instance of usage, by a one of said second participants, of a first subset associated with said first one of said sub-focus areas; and
creating source code to perform acts performed in the course of providing said first subset of said business process.

(Emphasis added). Generally referring to the bolded text of the claim, a focus area and a sub-focus area are provided. Each of these has 1. a business process or a subset thereof, and 2. participants.

As with claim 12, there are a multitude of limitations in claim 1 that are simply not present in Lynn et al. or Tsukakoshi. However, because a reference is deficient if it lacks only one limitation of the claim, this response will focus on the failure of Lynn et al. to teach “each of said second participants having only a single one of said plurality of roles.” See claim 1, above. Neither Lynn et al. nor Tsukakoshi discloses limiting participants to a single role in any context, whether with regard to business processes or otherwise and, in fact, the Examiner only cites Tsukakoshi for teaching the step of “creating source code to perform acts

performed in the course of providing said first subset of said business process”. (Official Action, p.5)

Participant roles are defined in the specification as explained above with regard to claim 12. Again, “A role represents the behavior of a participant...with respect to an aspect of a business process” App. 11, last paragraph. In rejecting claims 1-11, the Official Action does not cite any further portions of Lynn et al. or Tsukakoshi that suggest limiting participants to a single role. The Official Action cites Lynn et al. 3:15-3:17, which reads in full as follows:

[A] database, accessed by a subset of said software objects, defining work taxonomy and work steps for workflow processing; and a workflow engine utilizing said software objects and the work taxonomy to perform the workflow processing.

This language discloses software objects accessing a database, and a workflow engine utilizing software objects, but it does not suggest “participants having only a single one... roles.” See claim 1.

As neither Lynn et al. nor Tsukakoshi discloses or suggests the aforementioned limitation, whether taken alone or in combination, it is respectfully submitted that independent claim 12 is patentable over the cited art. As claims 2-11 depend either directly or indirectly from claim 1, they are believed allowable for the same reasons. Withdrawal of the rejections under 35 U.S.C § 103(a) is thus earnestly solicited.

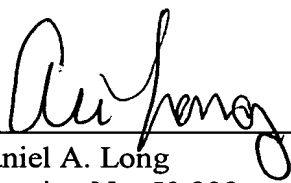
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CONCLUSION

Applicant believes that the present reply is responsive to each of the points raised by the Examiner in the outstanding Official Action, and submits that Claims 1-23 of the application are in condition for allowance. Favorable consideration and passage to issue of the application at the Examiner's earliest convenience is earnestly solicited.

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